WHAT IS CLAIMED IS:

1. A method of testing electronic signals in a network, comprising
    network units between which information can be exchanged by
    electronic data transmission through network connections,
5   wherein a plurality of testing components (TCI, TCII, TCIII) are
    coupled each to one or more of the network connections (101,
    102, 103) so that the testing components (TCI; TCII; TCIII) each
    can detect electronic signals relating to the electronic data
    transmission through the one or more network connections (101,
10 102, 103) to which the respective testing component is coupled,
    the method comprising the following steps:
    -   establishing a test connection (41) for exchange of
        electronic signals, including test and/or control signals,
        between one of the testing components (TCI) and at least
15   another one of the testing components (TCII) in response to a
        current testing task, the one testing component (TCI) being
        coupled to one network connection (101) and the at least one
        other testing component (TCII) being coupled to another
        network connection (102) in the network;
    -   establishing a master-server configuration in response to the
20   current testing task, the one testing component (TCI) being
        configured as a master testing component and the at least one
        other testing component being configured as a server testing
        component;
25 -   automatically synchronizing in time the master testing
        component (TCI) and the server testing component (TCII);
    -   electronically initiating detection of current electronic
        test signals by the master testing component (TCI) on the
        other network connection (102) by means of the server testing
30   component (TCII) and allocating electronic time information
        to the detected current electronic test signals in automatic
        consideration of the previously accomplished time
        synchronization; and
    -   processing the detected current electronic test signals and
35   the allocated electronic time information by the server
        testing component (TCII) and/or the master testing component

(TCI) in automatic consideration of the allocated electronic time information.

2. The method as claimed in claim 1, characterized in that another current testing task is carried out, upon termination of the current testing task, wherein another master-server configuration is established in response to the other current testing task, the at least one other testing component (TCII) being configured as a master testing component and the one testing component (TCI) being configured as a server testing component.

3. The method as claimed in claim 1, characterized in that establishment of the master-server configuration in response to the current testing task and/or establishment of the other master-server configuration in response to the other current testing task are limited to a predetermined period of time of which the duration depends on the current or other current testing task, respectively.

4. The method as claimed in claim 1, characterized in that a synchronization connection (43) for automatic synchronization in time is established between the master testing component (TCI) and the server testing component (TCII) for exchanging synchronization signals.

5. The method as claimed in claim 4, characterized in that synchronization signals transmitted from the master testing component (TCI) to the server testing component (TCII) comprise time standard signals so that the automatic synchronizing in time is released by the master testing component (TCI).

6. The method as claimed in any one of claim 1, characterized in that time standard signals transmitted via radio connections are received by the master testing component (TCI) and/or the server testing component (TCII) for automatic synchronizing in time.

7. The method as claimed in claim 1, characterized in that
    simulation signals are generated by means of the master testing
    component (TCI) and fed into the network, in that electronic
    data of the simulation signals, including associated electronic
5   simulation signal time information in response to the previously
    accomplished synchronizing in time, are stored in the master
    testing component (TCI), and in that the electronic data of the
    simulation signals stored in the master testing component (TCI)
    are automatically taken into consideration in the processing of
10 the current electronic test signals transmitted from the server
    testing component (TCI) to the master testing component (TCII).

8. The method as claimed in claim 1, characterized in that further
    simulation signals are generated by means of the server testing
    component (TCII) and fed into the network, in that electronic
    data of the further simulation signals, including associated
15 electronic simulation signal time information in response to the
    previously accomplished synchronizing in time, are transmitted
    from the server testing component (TCII) to the master testing
    component (TCI), and in that the electronic data of the further
20 simulation signals transmitted from the server testing component
    (TCII) to the master testing component (TCI) are automatically
    taken into consideration in the processing of the current
    electronic test signals transmitted from the server testing
    component (TCII) to the master testing component (TCI).

25 9. The method as claimed in claim 1, characterized in that
    electronic data of characteristics of the network are
    automatically taken into consideration in establishing the test
    connection (41) and establishing the master-server configuration
    in response to the current testing task and/or in establishing
30 the further master-server configuration in response to the
    further current testing task.

10. The method as claimed in claim 1, characterized in that the
    master-server configuration in response to the current testing
    task and/or the further master-server configuration in response

to the further testing task are established by a client-server
process.

11. An apparatus (TCI, TCII, or TCIII) for testing electronic
signals in a network including network units between which in-
formation can be exchanged by electronic data transmission
through network connections, the apparatus comprising
- connecting means for coupling to one or more of the network
  connections (101, 102, and 103, respectively);
- interface means for establishing a test connection (40 or 41)
  with at least one other testing apparatus in response to a
  current testing task for exchanging electronic data, including
  test and/or control signals, with the at least one other
  testing apparatus;
- configuration means for establishing a master configuration or
  a server configuration with the at least one other testing
  apparatus in response to the current testing task;
- synchronizing means for time synchronization with the at least
  one other testing apparatus;
- detecting means for detecting current electronic test signals
  relating to an electronic data transfer through the one or
  more network connections;
- allocating means for automatically allocating electronic time
  information to detected current electronic test signals in
  automatic consideration of the time synchronization with the
  at least one other testing apparatus;
- transmitting means for transmitting detected current
  electronic test signals and the allocated electronic time
  information to the at least one other testing apparatus; and
- processing means for processing the detected current
  electronic test signals and the allocated electronic time
  information.

12. The apparatus as claimed in claim 11, characterized by display
means (44, 45, and 46, respectively) for electronic output of
the current electronic test signals detected and/or the current
electronic test signals processed by the processing means.

13. The apparatus as claimed in claim 11, characterized by a user interface (50) for detection of user inputs and/or for the output of user data.

14. The apparatus as claimed in any one of claims 11, characterized by receiving means for receiving time standard signals which are transmitted via radio connections.

15. Use of a method as claimed in any one of claims 1 to 10 and/or an apparatus as claimed in any one of claims 11 to 14 in a telecommunications network.

16. Use of a method as claimed in any one of claims 1 to 10 and/or an apparatus as claimed in any one of claims 11 to 14 in an energy supply net.

17. Use of a method as claimed in any one of claims 1 to 10 and/or an apparatus as claimed in any one of claims 11 to 14 in a network of traffic engineering systems.

18. Use of a method as claimed in any one of claims 1 to 10 and/or an apparatus as claimed in any one of claims 11 to 14 in a network of process engineering measurement/control systems.